



# Introduction to the Ultra-Deepwater and Unconventional Program – Section 999

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- **About the legislation**
- **Relationship of the Section 999 program to DOE Oil and Natural Gas program**
- **Funding: history and process**
- **Program Consortium**
  - DOE oversight and management
  - RPSEA responsibilities
- **Program Elements**
  - Ultra-deepwater Resources
  - Unconventional Resources
  - Small Producer Program
  - NETL Complementary Research
  - Technology Transfer
  - Advisory Committees

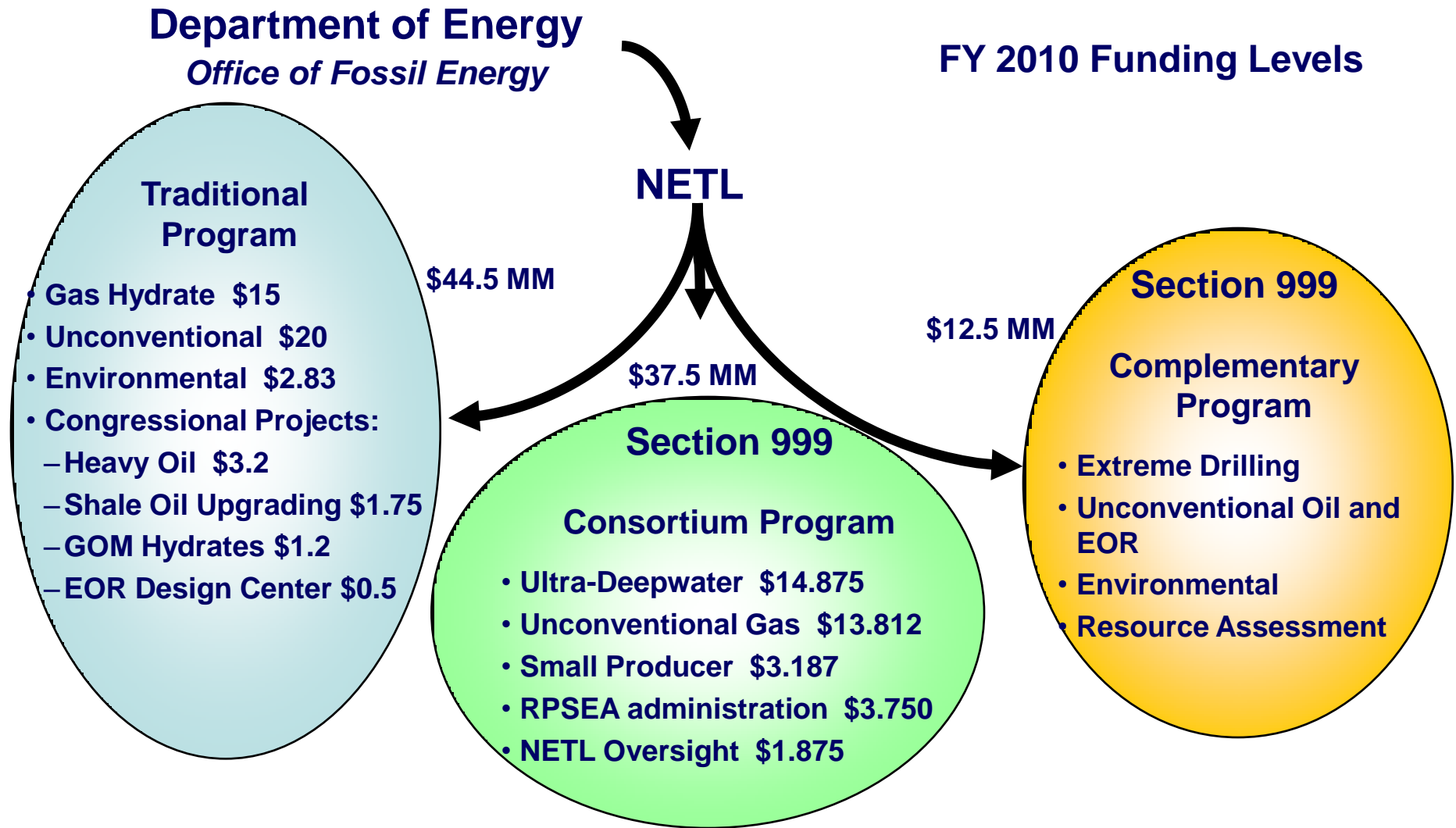
- **Energy Policy Act of 2005, Public Law 109-58**
- **TITLE IX--RESEARCH AND DEVELOPMENT**
- **Subtitle J--Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources**
- **Sec. 999 -- Ultra-deepwater and unconventional onshore natural gas and other petroleum research and development program**
- **Signed into Law August 8, 2005**

## Objective

- **Maximize value of oil, natural gas and other petroleum resources to the U.S.**
  - By increasing the supply of these resources
  - By reducing cost of exploration and production
  - By increasing efficiency of exploration and production
  - While improving safety and minimizing environmental impacts

## Resource Focus of Program:

- **Ultra-deepwater: water depth that is equal to or greater than 1,500 meters**
  - Also included: drilling to over 15,000 feet in the Outer Continental Shelf
- **Unconventional Resources: natural gas and other petroleum resource located onshore in an economically inaccessible geological formation,**
- **Small producers: special technology challenges**



- **First funds to RPSEA in FY 2007**
- **4 years of funding has been provided to RPSEA = \$ 142.5 million**
  - \$127.5 million for R&D and \$15 million for program administration
  - In addition, RPSEA R&D projects include at least 20% non-Federal cost sharing
- **FY 2011 funding to RPSEA likely in December 2010**
- **RPSEA has awarded 2007, 2008, 2009 and some 2010 funds as of August 1, 2010**
- **Funding for the Section 999 program ends September 30, 2014**
  - 8-year program (\$400 million)
  - Sunset clause in the Energy Policy Act of 2005

## Annual Funds Allocation

Area	Allocation	Area Funds	NETL Mgmt. 5%	RPSEA Admin.	R&D Funds for Distribution
Ultra-deepwater	35%	17,500,000	875,000	1,750,000	14,875,000
Unconventional and Other	32.50%	16,250,000	812,500	1,625,000	13,812,500
Small Producers	7.50%	3,750,000	187,500	375,000	3,187,500
Program Consortium Total		37,500,000	1,875,000	3,750,000	31,875,000
Complementary	25%	12,500,000	0	0	12,500,000
Sec 999 Total	100%	50,000,000	1,875,000	3,750,000	44,375,000

- **Section 999 legislation allows up to \$100 million per year in additional appropriations**
  - **No additional funds have been requested or appropriated to date**
- **Minimum 20% participant cost share for all RPSEA R&D projects is in addition to these amounts**

- **NETL competitively selected the Research Partnership to Secure Energy for America (RPSEA) in January 2007**
  - **Cost-shared contract**
- **DOE issues Section 999 annual plans in consultation with RPSEA and advisory committees**
- **NETL approves RPSEA solicitations**
- **NETL approves selections under RPSEA solicitations**
- **DOE Audit, with GSA review, of whether work and spending is consistent with EAct Section 999**
- **Benefits Assessment**
- **2 Advisory committees report to the Secretary of Energy**
- **NETL Complementary Research**
  - **External Technical Committee assessment of non-duplication**



- **RPSEA administers Section 999 program**
  - **Office in Sugar Land, Texas**
  - **Technical and contracting staff**
  - **Technical forums to gather insight and input into technology needs of a specific topic or area of importance to members**
  - **Technology Transfer**
- **RPSEA issues research solicitations with DOE's approval**
- **RPSEA makes project awards with DOE approval**
- **RPSEA disperses funds to research performers**

- **Board of Directors**
- **Staff**
- **> 160 Members**
- **Strategic Advisory Committee**
  - Provides strategic direction, advice on the research portfolio, long-range planning recommendations, and metrics determination
- **Ultra-deepwater and Unconventional Resources program advisory committees**
  - Recommendations for annual plan and proposal selection
- **Ultra-deepwater and Unconventional Resources technical advisory committees**
  - Review proposals and make selection recommendations
- **Small Producer Research Advisory Group**
- **Environmental Advisory Group**
  - Provides expertise to identify key regulatory barriers/issues

- **Ultra-deepwater Program**
- **Unconventional Research Program**
- **NETL Complementary Research**
- **Technology Transfer**
- **Advisory Committees**

- **Program Implemented by Chevron-administered *Deep Star* Consortium**
- **Current portfolio:**
  - 2007, 16 awards; 2008, 14 proposals selected; 2009, 11 selections
- **Program Focus:**
  - **Need 1: Drilling, Completion, and Intervention Breakthroughs:** novel ideas to reduce well construction and completion costs
  - **Need 2: Appraisal and Development Geoscience and Reservoir Engineering:** formation and reservoir characterization and/or surveillance to reduce the amount of unproduced hydrocarbons
  - **Need 3: Significantly Extend Subsea Tieback Distances/Surface Host Elimination**
  - **Need 4: Dry Trees/Direct Well Intervention and Risers in 10,000' Water Depth**
  - **Need 5: Continuous Improvement and Innovation**
  - **Need 6: Associated Safety and Environmental Concerns**

- **Legislation-defined focus areas:**
  - Advanced coalbed methane, tight sands and shale gas production
  - Deep drilling
  - Stranded gas
  - Innovative exploration and production techniques
  - Enhanced recovery techniques
  - Environmental mitigation
- **RPSEA program focuses on unconventional gas and the NETL complementary program includes unconventional oil - oil shale and tar sands and deep drilling**
- **Gas shales are rated the highest priority focus area by RPSEA**
- **Project portfolio:**
  - 2007: 19 projects awarded; 2008: 9 awards; 2009: 11 selections
- **2010 solicitation planned focus:**
  - Integrated technologies for a geographic area, novel concepts and integration of project results

- Funds consortia consisting of small producers or consortia organized primarily for the benefit of small producers
- Legislation-defined focus areas:
  - Complex geology involving rapid changes in the type and quality of the oil and gas across the reservoir
  - Low reservoir pressure
  - Unconventional natural gas reservoirs in coalbeds, deep reservoirs, tight sands, or shales
  - Unconventional oil reservoirs in tar sands and oil shales
- Current portfolio:
  - 2007: 7 projects; 2008: 6 projects; 2009: 6 proposals selected
- 2010 solicitation, issued July 28, 2010 and closing September 28, 2010
  - Focuses on development of tools, techniques and methods whose application would substantially increase commercial production and ultimate recovery from established mature fields, producing and inactive.

- **Conducted by NETL's Office of Research and Development**
  - Morgantown, Pittsburgh and Albany facilities
  - NETL-University Research Initiative – partnership with selected universities, National Labs and industry
- **2008 Plan Focus areas:**
  - Drilling Under Extreme Conditions
  - Environmental Impacts of Oil and Natural Gas Development
  - Enhanced and Unconventional Oil Recovery
  - Resource Assessment
  - Planning and Analysis Support

- **RPSEA requirements;**
  - Legislation requires that 2 1/2 percent of each award be designated for technology transfer and outreach activities
  - Subcontractor - to be selected - will coordinate 40% of technology transfer under RPSEA direction
- **PTTC, Petroleum Technology Transfer Council**
  - Publishes quarterly newsletter and conducts 85 regional and national workshops each year
  - 10 Regional Lead Organizations (RLO) coordinate technology transfer
  - Funded by DOE and RPSEA and managed by AAPG
- **Knowledge Management Database**
  - DOE/NETL Projects
  - Catalogue of documents from DOE Office of Science and Technology Information (OSTI) and NETL libraries
  - Section 999 Project summaries and reports
  - CD/DVDs: oil and natural gas CD/DVDs published by NETL



- **Advise the Secretary of Energy on development and implementation of activities related to:**
  - **Ultra-Deepwater program**
  - **Unconventional Resources program**
- **Responsibilities**
  - **Review Annual Plans**
  - **Make recommendations**
- **Additional details about the two advisory committees and the Federal Advisory Committee Act are contained in a separate presentation**

# Questions?

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U.S. DEPARTMENT OF  
**ENERGY**

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Oil and  
Natural Gas